O'R.	I.	Milk V-10 1032 Fat 2.6	7.6 Wt. day V-4 fat glob. many no increase fat few fatty acids	Wt. day 7.14 V-10 some some increase few		
B. (34) Ipara Forceps	II.	Milk V-10 1032 Fat 3.5	V-4 8 lbs. no fat glob. no fat glob. + acetic acid many fatty acid crystals	V-8 no occas. glob. few	8.12½ V-10 no many some	
J. 38 IIpara	III.	Milk 1030 Fat 3.3 Wt. 8.6 day	V-8 6.6 no fat drop many some fatty acid crystals	6 no many many	6.14 3 wks.	
C.	IV.	V-18 No Occasional No fatty acids	V-11 wt. day few many fat droplets many	V-27 no some many	wt. day 8.7	
S.	V.	V-27 many 7.10 slight increase many	7.4 few + many many	8 lbs.		
P.	VI.	V-4 occasional slight increase very few fatty acids	V-10 no many many	V-15 no many few	V-16 no many many	
Ca.	VII.	V-15 no some fat droplets many fatty acids	V-16 occasional many some	V-21 occasional no increase many	V-23 occasional many many	
Go.	VIII.	V-15 occasional many fat globules many fatty acids	V-16 many slight incr. many	V-18 no many many	V-21 no many few	V-23 few many many
Ja.	IX.	V-27 occasional many fat droplets many fatty acids				

feeding by a pipette or spoon, and the child is less likely to be chilled in the process.

During my present service at the Alexander Maternity, with the co-operation of the laboratory and the interne on the service, a study of the fat-digesting and fat-assimilating power of nine breast-fed, new-born infants has been made—twenty-five examinations of stools, and three of mother's milk, where the Babcock test for fat content was done. The examinations were made of three fragments of the infant stool: one alone, one stained with Sudan III, one stained with Sudan III and a drop of glacial acetic added and boiled. In the first specimen we get a general idea of the stool; in the second, the fat globules and fatty acids show up clearly, and on addition of the acetic acid and re-crystallization on cooling, fatty acids and fat globules are liberated from the soaps formed in digestion.

The conclusions from these tests would show that the new-born infant acquires rapidly the power to split up the fats into soaps and fatty acids, and the amount of the latter and the small amount of increase of free fat show that the digestion of fat is a stronger power in the early weeks of life than its assimilation.

The gain in weight of these infants in the three weeks was one pound average. They were all normal, healthy infants, with no complication save forceps delivery for three.

The non-assimilation of fats is therefore not a pathologic but a normal condition, and the supply of more than can be assimilated is nature's course, if one is justified in a conclusion from so small a group of cases.

CENTRALIZATION OF PUBLIC HEALTH ADMINISTRATION.

Prepared by JOHN NIVISON FORCE, M. D., Assistant Professor of Epidemiology, University of California, in conjunction with a Committee of the City Attorneys' Association of Northern California.

INTRODUCTION.

By B. D. MARX GREENE, Berkeley.

For a number of years, as City Attorney for several small towns in Contra Costa County, I have had unpleasant experiences with the general public health regulations which usually pertain to small communities. Our water has been polluted and unfit for human consumption, and it is doubtful whether any of the milk sold in the towns measures up to the required standards; there is no inspection of meat, and, in one town at least, disease-breeding nuisances abound and cannot be abated. This has all been brought about owing to the lack of proper health regulation enforced by full-time officers.

Again, as City Attorney of Berkeley several years ago, I helped in the preparation of a model milk ordinance under which competent inspectors were appointed. Other cities at or about the same time also adopted similar ordinances and their inspectors covered the same ground outside of the cities in the inspection of dairies which our inspectors covered. There was, therefore, grave duplication of time, salary and expense.

These two illustrations serve to show the chaotic state of our public health administration since

there is in some parts of the state no regulation at all and in other parts of the state too much regulation through duplication.

With a view to remedying the abuses of duplication in our larger cities, a committee of the City Attorneys' Association of Northern California, was appointed to consider the question of uniform legislation by means of ordinances or inspection districts. After many conferences, it was found that the only solution was an entire change in our present state health administration by the centralization of all powers of health control in one body with full-time inspectors and health officials acting directly under this central authority. The annexed report of Dr. Force, who worked in an advisory capacity in conjunction with our committee, expresses our views.

This report I presented to the Health Officers of the State of California assembled in convention at the same time as the League of California Municipalities, at Del Monte, October 12th to 17th, and the general principles enunciated therein were by that association unanimously endorsed with a recommendation for endorsement by the League of California Municipalities. Thereafter, I read the paper to the League in convention assembled and a resolution was unanimously adopted, approving the general principles set out in said paper, and referring the same to the Legislative Committee of the League for presentation to the Legislature of the State of California, with a view to action at the coming session.

B. D. MARX GREENE,
City Attorney of Antioch and Pittsburg.

An efficient public health administration is beyond the financial reach of the small rural or suburban community. Berkeley, for example, conducts a fairly efficient control of its milk supply, yet cannot afford to inspect at the time of slaughter, all cattle intended for the meat supply of its inhabitants. On the other hand, Oakland conducts a meat inspection in Emeryville but has no authority to destroy meat condemned in the course of this inspection. Some of the large dairies supplying milk to the metropolitan district around San Francisco Bay are inspected at least monthly by the Medical Milk Commissions of San Francisco and Alameda Counties. In addition they are visited by the regular milk inspectors of the Bay Cities, to say nothing of the occasional visits of the inspector for the State Dairy Bureau. In contrast to this prodigality of inspection, the small town with no organized milk inspection must depend on three agencies for even a partial survey of its milk conditions. If informed of contagious disease among the cattle the State Veterinarian's office may conduct an investigation. The State Dairy Bureau is attempting to cover the entire state with a very inadequate force of inspectors principally concerned in keeping up certain standards of milk purity and not concerned with either human or animal diseases in relation to milk products. Finally, the local health officer would probably inspect a dairy for a possible typhoid or diphtheria carrier if these diseases should chance to occur along the milk route supplied from that dairy.

The obvious remedy for these conditions is centralized administrative control similar to that provided by law for water districts. Mere similarity of ordinances and friendly reciprocity between municipalities will not secure the desired result.

An interesting experiment in co-operative public health administration has just been published by E. B. Phelps, Professor of Chemistry in the United States Public Health Service.[1] Professor Phelps entered into a contract to furnish a complete public health administration to a group of towns in the neighborhood of Boston, comprising a combined population of 32,650 scattered over an area of 100 square miles. He also contracted to furnish a complete milk inspection service to an additional population of 30,000. The organization consisted of the health officer, a bacteriologist, a field assistant who collected samples for the bacteriologist, a sanitary inspector and two clerks. The total cost of the above service for one year including salaries, laboratory equipment, office furniture and printing, as well as the cost and upkeep of a small automobile and a motorcycle amounted to $7,603.51. From an analysis of costs Professor Phelps has determined that the ideal administrative group would be a population of 60,000 which he claims could be served at an expense of twenty-one cents per capita. This would include the above mentioned employees besides the services of two women health visitors and such extra assistants as might be necessary.

The experiment is interesting as a study of efficiency, but the idea of delegating a governmental function to a private organization is distinctly anti-social and cannot be commended. The lesson to be drawn from this experiment is that high grade public health administration is economically possible in a sanitary district which employs a well trained force of workers.

The following plan is suggested for bringing the entire State of California under a centralized form of public health administration without affecting the rights of political subdivisions:

The State Board of Health: The state board should consist of the commissioner of health, a sanitary engineer, a licensed veterinarian and four other persons three of whom should be licensed physicians. The members of the board should be appointed by the governor for a term of four years with due provision to avoid an entire change of the membership at one time.

The Commissioner of Health should be a civil executive officer appointed to such office by the governor. He should give evidence of experience in public health administration. He should serve as president of the state board and as its executive officer. He should devote his entire time to the

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1 Phelps, E. B. Co-operative Public Health Administration. Public Health Reports, vol. 29, No. 39, p. 2477, Sept. 25, 1914.

duties of his office and be expressly forbidden to engage in any other occupation or business.

Powers and Duties of the State Board of Health:

1. The board should have general power of inspection with power to appoint inspectors, directors of bureaus and other employees subject to state civil service regulations.

2. The board should have power to make rules and regulations for the execution of the duties prescribed by law, including regulations for the guidance of local health officers.

3. The collection and publication of vital statistics and other matters of information concerning the public health should be a duty of the state board.

4. The board should maintain a system of laboratories for chemical and bacteriological examinations including the examination of milk.

5. It should be made a duty of the board to exercise control of the sanitation of all places where milk and other food products are produced and sold. This would add to the board the functions of the existing State Dairy Bureau which would be wonderfully strengthened by the change.

6. The board should exercise sanitary control over all public buildings which are the property of the state; over all factories, camps and tenements.

7. It should be the duty of the board to investigate epidemics of contagious diseases among animals. This would add to the board the functions of the State Veterinarian and assist in the solution of the problems of rabies, squirrel plague and bovine tuberculosis with which the state is confronted.

8. The board should conduct investigations of the infectious and occupational diseases of man and take necessary measures for their prevention and control.

9. The board should have power to investigate water pollution and sewage disposal throughout the state and take necessary measures to prevent injury to the public health by water pollution or the improper disposal of sewage.

It is obvious that many elements of the above powers and duties can only be administered by the board through a sufficient number of employees. It is therefore important to secure for the board the services of full-time local health officers. The present custom of appointing a local physician at a nominal salary, without any definite understanding as to his qualifications or the amount of time to be given to his duties, is unbusinesslike, to say the least. Furthermore, the health officer with a private practice is open to the jealousy of other physicians in the community.

The County Health Officer: The county health officer should be appointed by the supervisors from a list of eligibles certified by the State Civil Service Commission. The requirements for health officer should be indicated by the state board of health to the civil service commission. County health officers should be deemed state employees and should be compensated in part by the state as is now the custom for judges. The compensation of each county health officer shall be fixed by law depending on the population served. The portion of the compensation not paid by the state shall be apportioned to the one or more counties concerned, on a basis of population. If one health officer is apportioned to several counties, the supervisors of the several counties concerned should meet, for the purpose of appointing a health officer, in joint session. If the supervisors are unable to agree, the state board of health shall make the appointment, or any county is authorized to request the state board to make a suggestion as to the person to be appointed. County health officers shall be full-time employees and shall not be removed from office except for cause. Provision should be made for increased compensation with increase in time of service. Promotion should be consequent on examination.

Deputy County Health Officers. The requirements for deputy county health officers are the same as those of county health officers. While it is possible that a deputy may be assigned to the service of a sanitary district within a large county, or be in full charge of a small county or city, it is probable that deputy county health officers would be assigned to some special duty for a certain area. Thus a deputy county health officer would serve as director of the branch laboratory maintained by the state board of health in a county. Another deputy would be concerned in dairy inspection for the entire county or perhaps be conducting a sanitary inspection of the county schools. While the civil service commission should maintain a separate roster for deputy county health officers, it should be possible for any deputy who has served a sufficient time as such to be admitted to the examination for health officer.

City Health Officer: Any city may surrender its sanitary powers to the county and will then be provided with a deputy county health officer who shall serve as city health officer if the size of the city warrants his full time employment. Otherwise he may be given the city and a portion of the surrounding country in order to make up a population sufficient to form a practical sanitary district. It is obvious that it would be to the best interests of the city to take advantage of the combined state and county aid in the administration of its public health affairs.

Subordinates: Health visitors, assistants, helpers and clerks shall be furnished in such numbers as needed for the proper administration of the sanitary districts. They shall be appointed by the supervisors on recommendation of the county health officer. They shall be compensated entirely by the county.

Summary: The only efficient system of public health administration consists of a strongly centralized health authority operating at the head of a number of sanitary districts in charge of full-time trained employees appointed through civil service regulations.